DETAILED ACTION

Response to Amendment

1. This office action is in response to communications filed 03/24/2008. Claims 1 and 35 are amended. Claims 2-9, 19, 20, 36-43, 48, 49 are original. Claim 14, 17, 18, 21, 46, 47, 50-52, 55, 56 and 61-72 are previously presented. Claims 10-13, 15, 16, 22-34, 44, 45, 53-55, 57-60 are cancelled.

Response to Arguments

2. Applicant's arguments filed 03/24/2008 have been fully considered but they are not persuasive.

Regarding Claims 1 and 35, the applicant argues that Wistendahl does not disclose the claimed object mapping table that stores an identifier to such N data (Page 15). The applicant further argues that Wistendahl fails to teach separate mask data (Page 15). The applicant argues that user of Wistendahl's system selects a particular image, an IDM program is invoked to compare the selected coordinates with the hotspot coordinates stored as N data to determine whether the selected image is indeed a hotspot and there is not identifier (Page 15). The applicant argues that Wistendahl's N data simply defines a hot spot is akin to coordinate tracking data (Page 15). The applicant also argues that Srinivasan's invention can do everything Wistendahl's

invention can do if not more (Pages 15-16). Therefore, even N data may constitute a data structure it is not an identifier to an information data structure (Page 16). The applicant argues that the there is no suggestion or motivation to modify Wistendahl's N data were to identify the IDM program, it would not identify one of a plurality IDM programs. The applicant also argues that there is no motivation to combine ().

In response to the argument, Wistendahl discloses an object mapping table or N data information which includes N data indexed to specific type of interactive use of the media content (Column 7, lines 55-57, Column 6, lines 17-59, Figure 2). Microsoft Press 3rd edition Computer Dictionary defines data structure as an organization scheme, such as a record or array that can be applied to data to facilitate interpreting the data or performing operations on it. The N data is an organization scheme which applied to data to facilitate interpretation of the data or performing operations or for the interactive use of the media content.

Wistendahl discloses the mask of objects including an identifier or an object identifier for A'(F) identifying object A or hotspot B'(F) identifying object B (Column 6, lines 17-38, Column 7, lines 1-10, Figure 2, Figure 3). Wistendahl discloses a mask including an identifier to the object mapping table and the object mapping table having indicia from the corresponding mask to storing an identifier to a corresponding one of a pluriaty of information data structures including A'(F_i) or B'(F_i) (Column 6, lines 17-38, Column 10, lines 8-67) and the corresponding information data structure including information associated with the particular video object (Column 10, lines 57-67, Column 11, lines 1-40, Column 12, lines 1-18, 40-49). Srinivasan discloses identifying the

corresponding mask if the comparison results in a match (Column 7, lines 36-45, Column 12, lines 21-46, Column 21, lines 34-52). Wistendahl discloses the identifier. In this case, the motivation to combine is to provide media content without locking the content to a particular platform and to reduce the development time (Column 2, lines 35-45). These arguments are very similar to those made in previous remarks by the applicant. The Examiner respectfully disagrees with the applicant as the inventions of Srinivasan and Wistendahl meet the limitations for the applicant's claimed invention.

Furthermore, in *KSR International Co. Teleflex Inc.*, 127 S.Ct 1727, No. 04-1350, slip. op. at 12 (2007), the Court found that if all the claimed elements are known in the prior art then one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yield predictable results to one of ordinary skill in the art at the time of the invention.

3. Regarding Claims 2-9, 14, 17-21, 36-43, 46-52, 56, 61-62, 64-66 and 68-70 and 70, the applicant argues that Srinivasan and Wistendahl cannot meet the limitations because they depend on allowable base claim (Page 16).

In response to the argument, see response to claims 1 and 35.

4. Regarding Claims 56, 66 and 70, the applicant argues that Wistendahl cannot meet the limitations because Wistendahl does not disclose the claimed object mapping table (Pages 16-17).

In response to the argument, Wistendahl does disclose the object mapping table. See response to claims 1 and 35. Therefore, Wistendahl meets the limitations of Claims 56, 66 and 70.

5. Regarding Claim 72, the applicant argues that Kaiser does not disclose the visibility bit which will identify an object via highlighting (Page 17).

In response to the arguments, Kaiser discloses a digital system which includes programmable logic to perform functions (Column 7, lines 35-37). Kaiser discloses the digital system includes indicators designating a visual highlight (Column 10, lines 20-38, Column 7, lines 38-55). The system necessarily includes bits that enable processing of data. Therefore, the visual highlights of the reference disclose a visibility bit.

6. Regarding Claim 71, the applicant argues that Reimer does not disclose object properties table and it is not part of the annotation data that is transmitted to the receiver as part of “augmented video information" along with “video information” (Page 17). The applicant argues that Reimer teaches movie source information in a foundation information database (Page 17).

In response to the argument, Microsoft Press 3rd edition Computer Dictionary defines data structure as an organization scheme, such as a record or array, that can be applied to data to facilitate interpreting the data or performing operations on it. Therefore, the data structure of Wistendahl is an organization scheme that can be applied to data to facilitate interpreting data or performing operations on it. Reimer discloses on the corresponding information data structure is an object properties table (Figure 8, 802, Figures 10A-10C, Figure 11, 1106). The object properties table has entries (Figures 10A-10C, Column 18, lines 45-57) which includes an information category and an identifier to a second data structure providing details for the information category (Column 18, lines 45-56, Figure 10A, 1002, Figure 10B, 1012, Figure 10C, 1018, Figure 8, 802, Column 17, lines 40-47). Wistendahl disclose a corresponding data structure (Figure 2, Figure 3).

Furthermore, in *KSR International Co. Teleflex Inc.*, 127 S.Ct 1727, No. 04-1350, slip. op. at 12 (2007), the Court found that if all the claimed elements are known in the prior art then one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yield predictable results to one of ordinary skill in the art at the time of the invention.

7. Regarding the obvious type provisional double patent rejection, the applicant states they will submit a Terminal Disclaimer when there is an indication of allowance (Page 18).

In response to the statement, the Examiner notes that the applicant will submit the terminal disclaimer. Nevertheless, the double patenting rejection will remain until the rejection no longer applies.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 1-7, 17-21, 35-41, 50-52, 56 and 63-70 under 35 U.S.C. 103(a) as being unpatentable over Srinivasan et al (US 6,357,042 and hereafter referred to as "Srinivasan") in view of Wistendahl et al (US 6,496,981 and hereafter referred to as "Wistendahl")

Regarding Claims 1 and 35, Srinivasan discloses a hyperlinked broadcast system and a method of generating a hyperlinked video signal (Figure 1, Figure 14, Figure 18) comprising: a video headend or video source provides video information for a video program including a plurality of consecutive video frames (Figure 1, 12, Column 7, lines 22-25, Column 8, lines 13-14, 38-49),

an annotation system tracing or tracking movement of two or more video objects appearing in each of plurality of consecutive video frames from a first location to a

second location (Column 8, lines 5-37) and generating annotation data (Column 6, lines 8-19) and annotation data timing information (Column 7, lines 21-30, Column 8, lines 5-50), the annotation data including only one mask for each video frame of the plurality of consecutive frames (Column 5, lines 54-65, Figure 3, Figure 4), each mask being stamped with the corresponding annotation data timing information based on a frame time of the corresponding video frame (Abstract, Column 7, lines 21-30, Column 8, lines 5-50), each mask including location (Figure 4, Column 8, lines 5-50) and graphic data of two or more graphic images to be overlaid on two or more video objects or entities in the corresponding video frame (Column 5, line 54-65, Column 6, lines 8-19, Column 7, lines 33-47); and

an augmented video information transmission generator receiving the annotation data, the video information, and the annotation timing information, the augmented video information transmission generator generating an augmented video transmission signal comprising annotation data, the annotation data timing information, and the video information, transmits the augmented video transmission signal to a receiver (Column 5, lines 54-65, Column 6, lines 29-33, Column 11, lines 36-37, Figure 18, Column 3, lines 53-55, Column 4, lines 3-7, 17-24),

wherein the augmented video information transmission generator associates the video information with the annotation data using the annotation data timing information (Column 5, lines 54-65, Column 6, lines 29-33, Column 11, lines 36-37),

wherein the receiver receiving the augmented video transmission signal is program for each of the plurality of consecutive video frames (Column 36, lines 41-49, Column 21, lines 34-52) to:

compare a current annotation data timing information with a current frame time of a current video frame (Abstract, Column 4, lines 35-37, 55-62, Column 5, line 54-65, Column 6, lines 8-19, Column 7, lines 33-47, Column 12, lines 21-46, Column 36, lines 41-49, Column 21, lines 34-52);

identify the corresponding mask if the comparison results in a match (Column 7, lines 36-45, Column 12, lines 21-46, Column 21, lines 34-52);

retrieve the location and graphics data of the two or more graphics images from the identified mask (Abstract, Column 4, lines 35-37, 55-62, Column 5, line 54-65, Column 6, lines 8-19, Column 7, lines 33-47, Column 12, lines 21-46, Column 21, lines 34-52); and

overlay the two or more graphics images on the corresponding two or more video object appearing in the video frame based on the retrieved location and graphics data, wherein the overlaying of the two or more graphics images is synchronized on a frame by frame basis with the movement of two or more video objects from the first location to the second location over the plurality of consecutive video frames (Abstract, Column 4, lines 35-37, 55-62, Column 5, line 54-65, Column 6, lines 8-19, Column 7, lines 21-47, Column 12, lines 21-46, Column 36, lines 41-49, Column 21, lines 34-52). Srinivasan discloses annotation data comprises a plurality of object data packets (Column 21, lines 14-25).

Srinivasan is silent on the mask including an identifier to an object mapping table including one or more of the plurality of object data packets, the object mapping table including at least one entry with an indicia from the corresponding mask identifying a particular video object, the entry further storing an identifier to a corresponding one of a plurality information data structures included in one or more of the plurality object data packets, the information data structures including information for the particular video object. Wistendahl discloses on annotation data further includes a plurality of object data packets (Figure 3, 32, Column 11, lines 30-65, Column 17, lines 8-10), the mask further including an identifier or hotspot to an object mapping table or N data information (including values for several objects such as object A, A'(F), and object B, B'(F)) included in the object data packets (Column 6, lines 17-38, Column 7, lines 1-10, Figure 2, Figure 3, Column 11, lines 30-65, Column 17, lines 8-10). Microsoft Press 3rd edition Computer Dictionary defines data structure as an organization scheme, such as a record or array, that can be applied to data to facilitate interpreting the data or performing operations on it. Wistendahl discloses the object mapping table including at least one entry with an indicia from the corresponding mask identifying a particular video object (Figure 2, Column 6, lines 17-38), the entry further storing an identifier to a corresponding one of a plurality of information data structures included in one or more of the plurality of object data packets (Figure 2, Figure 3, Column 6, lines 17-38, Column 10, lines 8-67, Column 17, lines 1-13, Column 11, lines 30-65,), the information data structures including information for particular video object (Column 9, lines 59-67, Column 10, lines 1-67, Column 11, lines 1-40, Column 12, lines 1-18, 40-49).

Therefore, it would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Srinivasan to include the mask further including an identifier or hotspot to an object mapping table or N data information included in the object data packets (Column 6, lines 17-38, Column 7, lines 1-10, Figure 2, Figure 3, Column 11, lines 30-65, Column 17, lines 8-10), the object mapping table including at least one entry with an indicia from the corresponding mask identifying a particular video object (Figure 2, Column 6, lines 17-38), the entry further storing an identifier to a corresponding one of a plurality of information data structures included in one or more of the plurality of object data packets (Figure 2, Figure 3, Column 6, lines 17-38, Column 10, lines 8-67, Column 17, lines 1-13, Column 11, lines 30-65,), the information data structures including information for particular video object (Column 9, lines 59-67, Column 10, lines 1-67, Column 11, lines 1-40, Column 12, lines 1-18, 40-49) as taught by Wistendahl in order to use media content for interactive television (Column 1, lines 12-14, 45-67) as disclosed by Wistendahl.

Regarding Claims 63 and 67, Srinivasan discloses a hyperlinked broadcast system and a method of generating a hyperlinked video signal comprising:

a video source providing video information for a video program including a plurality of video frames (Figure 1, 12, Column 7, lines 22-25, Column 8, lines 13-14, 38-49);

receiving video information for a video program including a plurality of video frames (Figure 1, 12, Column 7, lines 22-25, Column 8, lines 13-14, 38-49)

an annotation system generating annotation data and annotation data timing information (Column 8, lines 5-37), the annotation data including a plurality of masks and a plurality of object data packets (Figure 4, Figure 3, Column 8, lines 5-37), each mask corresponding to a particular video frame of a video program (Figure 3, 31, 33, 29, 27) and including graphics data associated with one or more video objects in the particular video frame (Column 5, line 54-65, Column 6, lines 8-19, Column 7, lines 33-47), each mask being associated with the corresponding annotation data timing information (Figure 4, Figure 3, Column 5, line 54-65, Column 6, lines 8-19, Column 7, lines 33-47), and an object mapping table included in at least a particular one of the plurality of object data packets (Figure 4), the object mapping table including an entry associated with each of the one or more video objects in the particular video frame (Figure 3, Figure 4), communicating the annotation data timing information, the annotation data and the video information to an augmented transmission generator (Figure 1, Figure 3, Figure 4) and

an augmented video information transmission generator receiving the annotation data, the video information, and the annotation data timing information, the augmented video information transmission generator generating an augmented video transmission signal comprising the annotation data, the annotation data timing information, and the video information, and transmitting the augmented video transmission signal to a receiver, wherein the augmented video information transmission generator associates the video information with the annotation data using the annotation data timing information (Column 5, lines 54-65, Column 6, lines 29-33, Column 11, lines 36-37,

Figure 18, Column 3, lines 53-55, Column 4, lines 3-7, 17-24). Srinivasan discloses annotation data comprises a plurality of object data packets (Column 21, lines 14-25).

Srinivasan is silent on object mapping table as claimed.

Wistendahl discloses on annotation data further includes a plurality of object data packets (Figure 3, 32, Column 11, lines 30-65, Column 17, lines 8-10), the mask further including an identifier or a hyperlink to an object mapping table or N data information (including values for several objects such as object A, A'(F), and object B, B'(F))) (Column 6, lines 17-38, Column 7, lines 1-10). Microsoft Press 3rd edition Computer Dictionary defines data structure as an organization scheme, such as a record or array, that can be applied to data to facilitate interpreting the data or performing operations on it. Wistendahl discloses the object mapping table including at least one entry with an indicia from the corresponding mask identifying a particular video object or one entry associated with each of the one or more video objects in the particular video frame (Figure 2, Column 6, lines 17-38), each entry in the object mapping table storing an identifier to one or one or more information data structures included in one or more of the plurality object data packets (Figure 2, Figure 3, Column 6, lines 17-38, Column 10, lines 8-67, Column 17, lines 1-13, Column 11, lines 30-65), the information data structures including information for particular video object (Column 9, lines 59-67, Column 10, lines 1-67, Column 11, lines 1-40, Column 12, lines 1-18, 40-49).

Therefore, it would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Srinivasan to include the mask further including an identifier to an object mapping table or N data information (including values for several

objects) (Column 6, lines 17-38, Column 7, lines 1-10) such as including at least one entry with an indicia from the corresponding mask identifying a particular video object (Figure 2, Column 6, lines 17-38), the entry storing an identifier to one or one or more information data structures included in one or more of the plurality object data packets (Figure 2, Figure 3, Column 6, lines 17-38, Column 10, lines 8-67, Column 17, lines 1-13, Column 11, lines 30-65), the information data structures including information for particular video object (Column 9, lines 59-67, Column 10, lines 1-56) as taught by Wistendahl in order to use media content for interactive television (Column 1, lines 12-14, 45-67), to author exiting media content using tools to reduce development time (Column 2, lines 43-46) and so that media contact is kept uncorrupted so that the content can be displayed on any media delivery system or display platform (Column 3, lines 2-5) as disclosed by Wistendahl.

Regarding Claims 2 and 36, Srinivasan and Wistendahl disclose all the limitations of Claims 1 and 35 respectively. Srinivasan discloses the augmented video information transmission generator comprises a component, which inserts data into the VBI or a vertical blanking insertion device (Column 35, lines 60-62, Column 36, lines 36-40).

Regarding Claims 3 and 37, Srinivasan and Wistendahl disclose all the limitations of Claims 1 and 35 respectively. Srinivasan discloses that the augmented

video information transmission generator comprises a digital video data multiplexer (Column 36, lines 25-32).

Regarding Claims 4 and 38, Srinivasan and Wistendahl disclose all the limitations of Claims 1 and 35 respectively. Srinivasan discloses that he timing information comprises at least one of timestamp information and a frame number information (Column 3, Column 4, lines 3-16, Column 7, line 23, Column 8, lines 5-14).

Regarding Claims 5 and 39, Srinivasan and Wistendahl disclose all the limitations of Claims 1 and 35 respectively. Srinivasan discloses the programs comprise digital video signal (Column 36, lines 25-27).

Regarding Claims 6 and 40, Srinivasan and Wistendahl disclose all the limitations of Claims 1 and 35 respectively. Srinivasan discloses the programs comprise analog video signal (Column 36, lines 36-40).

Regarding Claims 7, Srinivasan and Wistendahl disclose all the limitations of Claim 1. Srinivasan disclose a post production environment (Figure 1, 11, Figure 18, 251, 253, 255), and a headend comprising the augmented video information transmission generator (Column 6, lines 33-35, Figure 18, 259), the video information and annotation data timing information are combined by the post production environment and transmitted to the headend (Column 7, lines 20-48, Column 8, lines 5-49, Column 35, lines 20-36).

Regarding Claims 8, Srinivasan and Wistendahl disclose all the limitations of Claim 7. Wistendahl discloses that the headend is a cable headend (Column 16, lines 6-8).

Regarding Claim 14, Srinivasan and Wistendahl disclose all the limitations of Claims 1 and 35 respectively. Srinivasan discloses displaying annotation data in response to a viewer request (Column 6, lines 8-19, Column 12, lines 21-40).

Regarding Claims 17 and 46, Srinivasan and Wistendahl disclose all the limitations of Claims 1 and 35 respectively. Srinivasan discloses that the mask comprises location information of two or more objects or entities in an annotated video frame in the corresponding video frame (Column 5, lines 54-65, Column 7, lines 22-48, Column 8, lines 5-50).

Regarding Claims 18 and 47, Srinivasan and Wistendahl disclose all the limitations of Claims 17 and 46 respectively. Srinivasan discloses the location information includes a graphics location reference that represents a fixed relation to a set of pixels associated with each object (Column 9, lines 19-55, Figure 4).

Regarding Claims 19 and 48, Srinivasan and Wistendahl disclose all the limitations of Claims 18 and 47 respectively. Srinivasan discloses a table of pixels based on a tracking box and object (Figure 4). Therefore, it is necessarily included that the pixels include the upper left most pixel in the associated pixel set if the object that is being tracked is located at the upper most left corner (Figure 4, Figure 3).

Regarding Claims 20 and 49, Srinivasan and Wistendahl disclose all the limitations of claims 18 and 48 respectively. Srinivasan discloses a table of pixels based on a tracking box and object (Figure 4), if the object is in the center position then the centroid pixel is in the associated pixel set (Figure 4, Figure 3). Therefore, it is necessarily included that the pixels include the centroid pixel in the associated pixel set.

Regarding Claim 41, Srinivasan and Wistendahl disclose all the limitations of Claim 35. Srinivasan discloses inserting the annotation data timing information in a vertical blanking interval of an analog video signal (Column 36, lines 36-41).

Regarding Claim 43, Srinivasan and Wistendahl disclose all the limitations of Claim 35. Srinivasan discloses the transmitting the timing information and video information to a broadcast network and subsequently to the augmented video transmission generator (Column 5, lines 54-65, Column 6, lines 29-40, Column 7, lines 22-25, Column 36, lines 25-40).

Regarding Claims 21 and 50, Shoff discloses all the limitations of Claims 1 and 35 respectively. Srinivasan discloses that the mask comprises location information about an object in a video frame to be annotated or supplemental content to be added to video (Figure 4). Srinivasan is silent on the shape information. In analogous art, Wistendahl discloses that location and shape information of an object in the video frame (Column 10, lines 8-35). Therefore, it would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Shoff to include shape information of an object in the video frame (Column 10, lines 8-35) as taught by Wistendahl in order to use media content for interactive television (Column 1, lines 12-14, 45-67) as disclosed by Wistendahl.

Regarding Claim 51, Srinivasan and Wistendahl disclose all the limitations of Claim 50. Wistendahl discloses the shape information is represented by a hyper link (Column 10, lines 36-56). The hyperlink can be a graphical overlay of the object (Column 9, lines 28-33).

Regarding Claim 52, Srinivasan and Wistendahl disclose all the limitations of Claim 50. Wistendahl discloses the shape information is represented by an outline of the object (Column 10, lines 25-28).

Regarding Claim 56, Srinivasan and Wistendahl disclose all the limitations of Claim 1. Wistendahl discloses the receiver being configured to overlay a graphics image on a particular video frame for the particular video object based on the graphics data included in the corresponding mask (Column 9, lines 59-67, Column 10, lines 1-56), retrieve the identifier of the object mapping table from the corresponding mask response to a user selection associated with the overlaid graphics image (Column 6, lines 60-67, Column 7, lines 1-10, Column 9, lines 59-67, Column 10, lines 1-56); retrieve the object mapping table based on the retrieved identifier (Figure 3, Figure 7a); identify the indicia in the corresponding mask for the particular video object for which the graphics image was overlaid (Column 15, lines 3-5); locate the entry in the object mapping table with the identified indicia (Figure 5b, 51b, Figure 7a, Figure 7B);); retrieving from the located entry the identify of the corresponding information data structures identified by the retrieved identifier (Column 6, lines 60-67, Column 7, lines 1-10, Column 15, lines 3-5); locate the entry in the object mapping table with the identified indicia (Figure 5b, 51b, Figure 7a, Figure 7B); identify the information data structures associated with the located entry (Figure 5a, Figure 5b); retrieve the information data structures identified by retrieved identifier (Figure 2, Figure 3); and display information based on the retrieved information data structure on the display device (Figure 7a, Column 13, lines 54-62).

Regarding Claims 64 and 68, Srinivasan and Wistendahl disclose all the limitations of Claims 63 and 67 respectively. Srinivasan discloses comparing a current annotation data timing information with a current frame time of a current video frame (Abstract, Column 4, lines 35-37, 55-62, Column 5, line 54-65, Column 6, lines 8-19, Column 7, lines 33-47, Column 12, lines 21-46, Column 36, lines 41-49, Column 21, lines 34-52); retrieve the location and graphics data of the graphics images from the identified mask if the comparison results in a match (Abstract, Column 4, lines 35-37, 55-62, Column 5, line 54-65, Column 6, lines 8-19, Column 7, lines 33-47, Column 12, lines 21-46, Column 36, lines 41-49, Column 21, lines 34-52); and overlay one or more graphics images generated based on the retrieved graphics data on the one or more video objects appearing in the current video frame (Abstract, Column 4, lines 35-37, 55-62, Column 5, line 54-65, Column 6, lines 8-19, Column 7, lines 21-47, Column 12, lines 21-46, Column 36, lines 41-49, Column 21, lines 34-52).

Regarding Claims 65 and 69, Srinivasan and Wistendahl disclose all the limitations of Claims 64 and 68 respectively. Srinivasan discloses the receiver is further programmed to draw the one or more graphics images on a frame-by-frame basis based on the graphics data included in a plurality of masks, the drawing of the one or more graphics images being synchronized to the corresponding video frame based on the annotation data timing information associated with the plurality of masks (Abstract, Column 4, lines 35-37, 55-62, Column 5, line 54-65, Column 6, lines 8-19, Column 7, lines 21-47, Column 12, lines 21-46, Column 36, lines 41-49, Column 21, lines 34-52). Wistendahl discloses drawing one or more graphic images on a frame-by-frame basis

based on the graphics data included in a plurality of masks (Column 14, lines 10-21, Column 10, lines 8-61).

Regarding Claims 66 and 70, Srinivasan and Wistendahl disclose all the limitations of Claims 65 and 69 respectively. Wistendahl discloses the receiver being configured to overlay a graphics image on a particular video frame for the particular video object based on the graphics data included in the corresponding mask (Column 9, lines 59-67, Column 10, lines 1-56), receive a user selection associated with one of the overlaid graphics images for a particular video frame (Column 15, lines 3-5), retrieve the identifier of the object mapping table from the corresponding mask response to a user selection associated with the overlaid graphics image (Column 6, lines 60-67, Column 7, lines 1-10, Column 9, lines 59-67, Column 10, lines 1-56); retrieve the object mapping table based on the retrieved identifier (Figure 3, Figure 7a); locate the entry in the object mapping table for the video object associated with the user selection (Column 6, lines 60-67, Column 7, lines 1-10, Figure 5b, 51b, Figure 7a, Figure 7B, Column 13, lines 1-25, Column 14, lines 10-21); retrieving from the located entry the identify of the corresponding information data structures identified by the retrieved identifier (Column 6, lines 60-67, Column 7, lines 1-10, Column 15, lines 3-5); locate the entry in the object mapping table with the identified indicia (Figure 5b, 51b, Figure 7a, Figure 7B); identify the information data structures associated with the located entry (Figure 5a, Figure 5b); retrieve the information data structures identified by retrieved identifier (Figure 2, Figure 3); and display information based on the retrieved information data structure on the display device (Figure 7a, Column 13, lines 54-62).

10. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Srinivasan in view of Wistendahl, as applied to Claim 7 above, further in view of Shoff et al (US 6,240,555 and hereafter referred to as "Shoff").

Regarding Claims 9, Srinivasan and Wistendahl disclose all the limitations of Claim 7. Srinivasan and Wistendahl do not to disclose the headend is a satellite headend. In analogous art, Shoff discloses a post production environment (Figure 2, 22), a broadcast network (Column 4, lines 43-50), and the post production environment combines video data and synchronized timing data and transmits to a headend or node (Column 4, lines 43-50). Shoff discloses that the node is a satellite headend (Column 4, lines 45-52). Therefore, it would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Srinivasan to include that the headend is a satellite headend (Column 4, lines 45-52) as taught by Shoff in order to enable viewer interactively with video program (Column 1, lines 8-14) as disclosed by Shoff.

11. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Srinivasan in view of Wistendahl, as applied to Claim 35 above, further in view of Oguro et al (US 2001/0033739 and hereafter referred to as "Oguro").

Regarding Claim 42, Srinivasan and Wistendahl disclose all the limitations of Claim 35. Srinivasan disclose inserting timing information into the VBI of an analog signal (Column 36, lines (Column 25-40). Srinivasan and Wistendahl are silent the insertion of data in the vertical ancillary data or VBI of a digital video signal. Oguro

discloses a television broadcast system, which transmits digital video signals to the user (Page 5, paragraph 0077) and inserts data into the VBI of a digital video signal (Page 5, paragraph 0076). Therefore, it would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the combination to include inserting information in the VBI of a digital video signal (Page 5, paragraph 0076) as taught by Oguro in order to provide copy protect television broadcast programs of a digital video signal (Page 1, paragraphs 0001-0006) as disclosed by Oguro.

12. Claims 61, 62 and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Srinivasan in view of Wistendahl, as applied to Claims 1 and 35 above, further in view of Kaiser et al (US 6,615,408 and hereafter referred to as "Kaiser").

Regarding Claims 61 and 62, Srinivasan and Wistendahl disclose all the limitations of Claims 1 and 35 respectively. Srinivasan discloses overlaying two or more graphics images for alerting a viewer of the interactive data (Column 6, lines 6-19). Srinivasan and Wistendahl do not explicitly disclose the overlaying of the graphics images is for alerting a viewer of the interactive data associated prior to the viewer transmitting an interactive command with respect to one of video object or video objects. Kaiser discloses overlaying of the two or more graphics images is for alerting a viewer of the interactive data associated with the two or more video objects prior to the viewer transmitting an interactive command with respect to one of the two or more video objects (Figure 6B, Column 10, lines 20-41). Therefore, it would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the

combination to include overlaying of the two or more graphics images is for alerting a viewer of the interactive data associated with the two or more video objects prior to the viewer transmitting an interactive command with respect to one of the two or more video objects (Figure 6B, Column 10, lines 20-41) as taught by Kaiser in order display a locator or locators for a video object or objects without clutter video (Column 1, lines 8-11, 34-40) as disclosed by Kaiser and to make it easier for a user so that they do not have to determine what is interactive and provides more information.

Regarding Claim 72, Srinivasan and Wistendahl disclose all the limitations of Claim 1. Srinivasan discloses overlaying two or more graphics images for alerting a viewer of the interactive data in which a mask includes data enabled to identify video objects in a particular video shot (Column 6, lines 6-19). Srinivasan and Wistendahl do not disclose a visibility bit indicative of visually identify an object. Kaiser discloses a mask or hotspot includes a visibility bit or highlight information indicative of whether video objects appearing in the corresponding video frame are enabled for being visually identified for a particular video shot (Column 10, lines 20-42). Therefore, it would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the combination to include a visibility bit indicative of whether video objects appearing in the corresponding video frame are enabled for being visually identified for a particular video shot (Column 10, lines 20-42) as taught by Kaiser in order display a locator or locators for a video object or objects without clutter video (Column 1, lines 8-11, 34-40) as disclosed by Kaiser and to make it easier for a user so that they do not have to determine what is interactive and provides more information.

13. Claim 71 is rejected under 35 U.S.C. 103(a) as being unpatentable over Srinivasan in view of Wistendahl, as applied to Claim 1 above, further in view of Reimer et al (US 5,553,221 and hereafter referred to as "Reimer").

Regarding Claim 71, Srinivasan and Wistendahl disclose all the limitations of Claim 1. Wistendahl disclose a corresponding data structure (Figure 2, Figure 3). Srinivasan and Wistendahl are silent on the corresponding information data structure is an object properties table storing one or more second entries, wherein each of the one or more second entries includes an information category and an identifier to a second one of the plurality of information data structures providing details for the information category. Microsoft Press 3rd edition Computer Dictionary defines data structure as an organization scheme, such as a record or array, that can be applied to data to facilitate interpreting the data or performing operations on it. In analogous art, Reimer discloses on the corresponding information data structure is an object properties table (Figure 8, 802, Figures 10A-10C, Figure 11, 1106) storing one or more second entries (Figures 10A-10C, Column 18, lines 45-57), wherein each of the one or more second entries includes an information category and an identifier to a second one of the plurality of information data structures providing details for the information category (Column 18, lines 45-56, Figure 10A, 1002, Figure 10B, 1012, Figure 10C, 1018, Figure 8, 802, Column 17, lines 40-47). Therefore, it would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the combination to include corresponding information data structure is an object properties table (Figure 8,

802, Figures 10A-10C, Figure 11, 1106) storing one or more second entries (Figures 10A-10C, Column 18, lines 45-57), wherein each of the one or more second entries includes an information category and an identifier to a second one of the plurality of information data structures providing details for the information category (Column 18, lines 45-56, Figure 10A, 1002, Figure 10B, 1012, Figure 10C, 1018, Figure 8, 802, Column 17, lines 40-47) as taught by Reimer in order to link and present information of movies with underlying source information (Column 1, lines 8-11, 34-40) as disclosed by Reimer.

Double Patenting

14. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

15. Claim 1 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 7,249,367 in view of Srinivasan.

The instant application's limitations of " a hyperlinked broadcast system comprising: a video source providing video program including a plurality of consecutive video frames" is met by the limitations of "A hyperlinked video broadcast system" of U.S. Patent No. 7,249,367.

The instant application's limitations of "an annotation system generating annotation data, the annotation data including only one mask for each video frame of the plurality of consecutive frames, each mask being stamped with the corresponding annotation data timing information based on a frame time of the corresponding video frame, each mask including location and graphic data of two or more graphic images to be overlaid on two or more video objects or entities in the corresponding video frame; the annotation data further including a plurality of object data packets, mask including an identifier to an object mapping table including one or more of the plurality of object data packets, the object mapping table including at least one entry with an indicia from the corresponding mask identifying a particular video object, the entry further storing an identifier to a corresponding one of a plurality information data structures included in one or more of the plurality object data packets, the information data structures including information for the particular video object " is met by the limitations " a mask generator generating a plurality of masks, each mask corresponding to a particular video frame of a video program, each mask including graphics data

associated with one or more video objects in the particular video frame, each mask including an identifier to an object mapping table including an entry associated with each of the one or more video objects in the particular video frame, each entry in the object mapping table referencing one or more information data structures including information associated with the corresponding video object; an annotation source providing a plurality of object data packets including the object mapping table and the one or more information data structures for the one or more video objects" of U.S. Patent No. 7,249,367.

The instant application's limitations of an augmented video information transmission generator receiving the annotation data, the video information, the augmented video information transmission generator generating an augmented video transmission signal comprising annotation data, the and the video information, transmits the augmented video transmission signal to a receiver" is met by limitation "a transmitter transmitting the television broadcast signal" of U.S. Patent No. 7,249,367.

wherein the augmented video information transmission generator associates the video information with the annotation data using the annotation data timing information, wherein the receiver receiving the augmented video transmission signal is program for each of the plurality of consecutive video frames to; identify the corresponding mask if the comparison results in a match; retrieve the location and graphics data of the two or more graphics images from the identified mask; and overlay the two or more graphics images on the corresponding two or more video object appearing in the video frame based on the retrieved location and graphics data, wherein the overlaying of the two or

more graphics images is synchronized on a frame by frame basis with the movement of two or more video objects from the first location to the second location over the plurality of consecutive video frames" is met by limitations "wherein the receiver is programmed to retrieve and overlay the graphics image corresponding to the particular video object on the corresponding video frame, receive viewer actuation of the overlaid graphics image, and in response to the viewer actuation, review the indicia in the particular information data structure corresponding to the particular video object for determining whether the particular video object is linked to one of the plurality of multiplexed program streams, and in response to a determination that the particular video object is linked to one of the plurality of multiplexed program streams, retrieve from the data particular information data structure the identifier of the particular one of the plurality of multiplexed program streams, and switch from presenting a current multiplexed program stream to presenting the particular one of the plurality of multiplexed program streams" of U.S. Patent No. 7,249,367.

The instant application is missing including "a plurality of multiplexed program streams, an identifier for a particular one of the plurality of multiplexed program streams, a particular one of the information data structures including an indicia indicative that a particular one of the one or more video objects is linked to one of the plurality of multiplexed program streams, and an encoder encoding the plurality of masks and the plurality of object data packets into a television broadcast signal; a transmitter transmitting the plurality of multiplexed program streams to a receiver." It would be obvious to modify U.S. Patent No. 7,249,367 to make the claim broader.

The instant application's "an annotation system tracking movement of two or more video objects appearing in each of plurality of consecutive video frames from a first location to a second location and generating annotation data timing information, an augmented video information transmission generator generating the annotation timing information, the augmented video information transmission generator generating an augmented video transmission signal comprising annotation data, the annotation data timing information, and the video information, transmits the augmented video transmission signal to a receiver, wherein the receiver compare a current annotation data timing information with a current frame time of a current video frame" are additional features.

It would be obvious to include the limitations in U.S. Patent 7,249,367 as they are disclosed by prior art. Srinivasan discloses an annotation system generating annotation data timing information (Column 7, lines 21-30, Column 8, lines 5-50), the augmented video information transmission generator receiving the annotation timing information, the augmented video information transmission generator generating an augmented video transmission signal comprising annotation data, the annotation data timing information, and the video information(Column 5, lines 54-65, Column 6, lines 29-33, Column 11, lines 36-37, Figure 18, Column 3, lines 53-55, Column 4, lines 3-7, 17-24),wherein the augmented video information transmission generator associates the video information with the annotation data using the annotation data timing information (Column 5, lines 54-65, Column 6, lines 29-33, Column 11, lines 36-37),wherein the receiver compare a current annotation data timing information with a current frame time

of a current video frame (Abstract, Column 4, lines 35-37, 55-62, Column 5, line 54-65, Column 6, lines 8-19, Column 7, lines 33-47, Column 12, lines 21-46, Column 36, lines 41-49, Column 21, lines 34-52).

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hopcroft et al (US 6,359,629) discloses a visibility bit (Abstract, Column 8, lines 9-18).

17. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to FARZANA E. HOSSAIN whose telephone number is

(571)272-5943. The examiner can normally be reached on Monday to Friday 7:30 am to 3:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Chris Kelley/
Supervisory Patent Examiner, Art Unit 2623

FEH
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